

## ABSTRACT OF THE DISCLOSURE

The invention provides an isolated gene encoding Mch4 or an isolated gene encoding Mch5 as well as functional fragments thereof. Also provided are isolated nucleic acid sequences encoding Mch4 or Mch5 or functional fragment thereof. The gene or nucleic acid sequences can be single or double stranded nucleic acids corresponding to coding or non-coding strands of the Mch4 or Mch5 nucleotide sequences. Also provided are genes and nucleic acids encoding functional fragments such as the FADD-like domains Mch4A, Mch4B, Mch5A and Mch5B. Isolated Mch4 or Mch5 polypeptides or functional fragments thereof including the FADD-like domains Mch4A, Mch4B, Mch5A and Mch5B are also provided.